

5127126



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D6104-005
Job Sheet 185844



Part No: D6104-005

Job Qty: 20 ea

Part Name: Round Billet, 17-4



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/5/18

Job Tracking No:

Due Date: 11/26/18

Created By: Chantal Lavoie

Type: Stock

Description:

Note: DWG REV B

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	20 pcs		11/26/18	0.00	0.00	Purchasing		At 18/11/13
110	Packaging	20 pcs		11/26/18	0.00	0.00	Packaging2		At 18/11/13
120	QC	20 pcs		11/26/18	0.00	0.00	QC18		At 18/11/13
130	Packaging	20 pcs		11/26/18	0.00	0.00	Packaging3-2		At 18/11/13
140	QC21-SA	20 Ea		11/26/18	0.00	0.00	QC21		21 NOV 15 2018

Part Op 100 - Issue P/O: 41594 b) Ø4.00" x 5.10" long d) Material: 17-4PH Stainless steel (Ams 5643 or Aisi 630)
 Descriptions: 110 - Ensure material certification is attached
 120 - Ensure Material certification comply to Dwg D6104
 130 - LOCATION: MAT043

NOV 05 2018

DAS
13
9-89

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6104-005P	17-4 SS Roundbar 4.00"Od	20 pcs (1 ea)	100-Purchasing	512702

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D6104-005P	20	0	0

Part Specifications

Specifications could not be found.

Plex 11/5/18 7:26 AM dart.lavoie.chantal

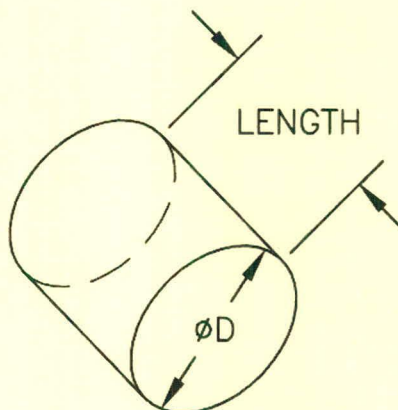
103

DART

DESIGN <i>RT</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6104	Rev. B SHEET 1 OF 1
DATE 02.11.25		TITLE ROUND BILLET, 17-4	SCALE NTS
A	01.04.10	NEW ISSUE	
B	02.11.25	CLARIFY ALLOY SPEC ADDED D6104-009/-011 REDUCE LENGTH OF BILLETS	

RELEASED02.11.29 *[Signature]*

SPECIFICATION CONTROL DRAWING



MATERIAL: 17-4 PH SS (AMS 5643 OR AISI 630) MIN UTS = 170 KSI (38 HRc)

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES

Part No.	Alloy	D (Diameter)	Length
D6104-001	17-4 PH STAINLESS STEEL	Ø3.00	3.80
D6104-003	17-4 PH STAINLESS STEEL	Ø3.25	3.80
D6104-005	17-4 PH STAINLESS STEEL	Ø4.00	5.10
D6104-007	17-4 PH STAINLESS STEEL	Ø4.50	5.10
D6104-009	17-4 PH STAINLESS STEEL	Ø5.25	4.10
D6104-011	17-4 PH STAINLESS STEEL	Ø6.50	4.10

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO041594

Supplier: MEC002-VU
Metaux Castle
P.O. Box 4090 Stn A
Toronto
ON
M5W OE9 Canada

PO No: PO041594

PO Date: 11/5/18

Due Date: 11/26/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

E-MAILED
NOV 06 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pynt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	185840	D6101-001P		7075-T7351 2X6X6.25 : Various STC's AS PER DWG D6101 REV. B SIZE: 6.00" X 6.250" X 2.00" THICK GRAIN DIRECTION ALONG 6.00" LENGHT MATERIAL: 7075-T7351 QQ-A-250/12 TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	11/26/18	20 pcs	0 pcs	20 pcs	\$29.57/pcs	\$591.40
2	185839	D6101-003P		7075-T7351 2X6.25X7.875 : Various STC's AS PER DWG D6101 REV. B SIZE: 7.875" X 6.250" X 2.00" THICK GRAIN DIRECTION ALONG 7.875" LENGHT MATERIAL: 7075-T7351 QQ-A-250/12 TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	11/26/18	20 pcs	0 pcs	20 pcs	\$38.82/pcs	\$776.40



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041594**

Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
3	185838	D6101-005P		7075-T7351 8.25X5.0X2.5 : Various STC's AS PER DWG.D6101 REV.B SIZE: 5.00" X 8.250" X 2.50" THICK GRAIN DIRECTION ALONG 5.00" LENGHT MATERIAL: 7075- T7351 QQ-A-250/12 TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	11/26/18	20 pcs	0 pcs	20 pcs	\$40.54/pcs	\$810.80
4	185837	D6101-007P		7075-T7351 8.25X7.75X2.5 : Various STC's AS PER DWG D6101 REV. B MATERIAL: 7075- T7351 (QQ-A- 250/12) SIZE: 7.750" X 8.250" X 2.50" THICK GRAIN DIRECTION ALONG: 7.750" LENGTH TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	11/26/18	40 pcs	0 pcs	40 pcs	\$61.72/pcs	\$2,468.80
5	185841	D6101-015P		Aluminum Billet : Various STC's As per Dwg D6101 Rev. B	Firmed	-	11/26/18	20 pcs	0 pcs	20 pcs	\$57.20/pcs	\$1,144.00
6	185842	D6101-017P		Aluminum Billet : Various STC's As per Dwg D6101 Rev. B	Firmed	-	11/26/18	12 pcs	0 pcs	12 pcs	\$32.64/pcs	\$391.68
7 AT	185843	D6103-003P		Round Alum Billet : Various STC's AS PER DWG D6103 REV. B MATERIAL: 7075- T7351 AS PER QQ- A-225/9 SIZE: 3.500" X 12.500" LONG	Firmed	-	11/26/18	20 pcs ✓ 22x	0 pcs AT 18/11/12	20 pcs	\$60.40/pcs	\$1,208.00



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041594**

Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
8	185844	D6104-005P		17-4 SS Roundbar 4.00"Od : Various STC's AS PER DWG D6104 REV. B MATERIAL: 17-4 PH AS PER AMS 4643 OR AISI 630 SIZE: 4.00" X 5.10" LONG	Firmed	-	11/26/18	20 pcs	0 pcs	20 pcs	\$54.20/pcs	\$1,084.00
Grand Total:												\$8,475.08

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/5/18 1:16 PM dart.lavoie.chantal

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3753146

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 09-NOV-18	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 3753146-2	

Shipment Details	Final Destination Branch - TOR
-------------------------	---------------------------------------

Order No	Line No	Item No	Description				
5310870	2	42464.MO	4.0000.RD.17CR-4NI.STAINLESS.RT.SOL TR.COND A.132.0000-156.0000 CUT TO 5.1 IN (+ .1250/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: AMS 5643				
Purchase Order No		Part Number	Ordered Qty		Invoice Qty		
41594		YOUR ITEM NUMBER: D6104-005	20.00 PCS		20.00 PCS		
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS					
Delivery No.	Mill/Source	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
122367980	NORTH AMERICAN STAINLESS			20			374.5814

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

SUE KALOUS





Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

Reviewed by Authorized Castle Metals Representative:

Date:

Name:

NOV 09 2018

SUE KALOUS





**NORTH AMERICAN
STAINLESS**

METALLURGICAL TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 438670 06

Mail To:

A.M. CASTLE AND COMPANY
1420 KENSINGTON ROAD-SUITE 220
OAK BROOK IL 60523

Ship To:

A.M. CASTLE AND COMPANY
1625 TILLIE LEWIS DRIVE
STOCKTON CA 95206

Date: 8/20/2018 Page: 1 Of 1

Steel: 630 (17-4)

Finish: Hot Finish

Dia/Thk: 4.0000 in

Leg Length:

Length: 144.00 in

Corrosion:

Customer: 0032 014

NAS Order: LP 89877 1

Red Ratio: 4.7 :1

Heat Treat Code: 48,311

Your Order: 474418-1

Item Code: 42464

PRODUCT DESCRIPTION:

Round Bar, Hot Rolled, Annealed, Rough Turned
UNS S17400; EN 10204 3.1, ASTM A484/18, MACRO OK, AMS 5643/V
ASTM A564/13e1, AMS 2303/F, ASME SA564/13, ASTM F899/12B
SOL. ANNEALED @ 1900F MIN FOR 1 HR MIN. AND AIR COOLED TO RT
UT PER API6A PSL3, ASTM A388/S1 CRITERIA, UT PASSED
H900 MECH. PROPERTIES ARE CAPABILITY ONLY*

REMARKS:

COMPLIES W/REQUIREMENTS OF DFAR 252.225-7009 EU DIRECTIVE
2011/65/EU. RoHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

CASTLE METALS STO

HEAT NUMBER

MECHANICAL ID

ITEM CODE 42464

LOT NUMBER

PURCHASE ORDER

SUPPLIER NAS

SPECIFICATION/CS

COMPLIES

APPROVED DATE

Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight
BJ73542	1522	BJ73754	1540									

ANAB, ISO/IEC 17025, Certificate# L2323

CHEMICAL ANALYSIS

CM(Country of Melt)

ES(Spain)

US(United States)

ZA(South Africa)

JP(Japan)

Chemical Analysis per ASTM A751/14a

NAS Heat	Supplier Heat	CM	C %	CB %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
879N		US	.021	.237	.06	15.14	3.37	.77	.024	.022	4.25	.024
			S %	SI %	TA %	TI %						
			.0125	.62	.0050	.0020						

MECHANICAL PROPERTIES

	1 d o i c r	HB No.	Grain No.	Ferrite %	TS-900CAP KSI	YS-900CAP KSI	EL-900CAP % 4D	RA-900CAP %	RC-900CAP No.	FREQ. No.	SEV. No.
BJ73542	R L	341.0	7.0	.16	199.66	172.18	10.35	40.37	42.0	.29	.15
BJ73754	R L	341.0	7.0	.16	199.66	172.18	10.35	40.37	42.0	.29	.15

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS

Technical
Dept. Mgr.

KRIS LARK

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6104-005

PO / BATCH NO.: P00M1594/5127126

DATE: 18/11/13

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 4.000"

QUANTITY RECEIVED: 20x

THICKNESS RECEIVED: 4.000"

QUANTITY INSPECTED: 20x

SHEET SIZE ORDERED: -

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	AMS 5643
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	LT 879N
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AM</u> DATE: <u>18/11/13</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

